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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,631	09/08/2003	Daniel Robert Olson	124366 (1306-13)	9446

7590 09/15/2006

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EXAMINER	
ANGEBRANNDT, MARTIN J	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,631	OLSON ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 6/26/06.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1,2 and 4-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2 and 4-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The response of the applicant has been read and given careful consideration. Responses to the arguments are presented after the first rejection to which they are directed. Rejections of the previous office action, not repeated below are withdrawn based upon the amendments and arguments of the applicant.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1,2 and 4-32 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims language of claims 1 and 20 describing the barrier layer as "between the second substrate and the laser incident surface" is flawed as the barrier layer **is** the incident surface of the light in some of the embodiments. The applicant should amend the claims to describe the barrier layer as being provided on the outer surface of the second substrate. (claims 1 and 20).

Also the data storage layer should describe the data layer being on the side of the reflective layer opposite that of the first substrate (otherwise the readout prevention does not prevent readout of information in the data layer, but only of the embossed information coated with the reflective layer, since it would be read through the first substrate, not the same (the reflective layer is opaque). (claims 1, 20 and 22)

The objection is that the language cited is misleading and vague. The only case disclosed in the instant specification bounded by the claims is that where the barrier layer is the outermost

layer. The language implies that the laser is not incident upon the barrier layer surface and this is not the case in the invention as disclosed. The rejection stands.

Also in claims 1, 20 and 22, please replace the language "layer disposed on or included within the reactive layer" with composition incorporated into the reactive layer or provided as a separate layer between the reactive layer and the second substrate- - . There is no basis for the reactive layer being multilayered and the language of the claims suggests that it exists as a separate layer within the reactive layer, while the specification is quite clear in the reactive materials being included in the adhesive formulation, which is descriptive of mixing of the two compositions.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1,2 and 4-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Ezbainsky et al. '892, van de Grampel et al. '501, Ezbainsky et al. '323 or Wisnudel et al. '909, in view of Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944.

Ezbainsky et al. '892 in example 15 describes PMMA/leuco methylene blue solutions described in examples 14 (which refers to example 1) applied to aluminized polycarbonate substrate, which are then coated with Daicure SD698, which is a UV curable adhesive, and a polycarbonate disc and then cured using a UV light. The decrease in reflectivity over time is shown in figures 3 and 4, where the reflectivity is initially above 60% for the deaerated samples

and declines over time to about 15%. [0136-0139]. The use of various specific polycarbonate materials is described in sections [0025-0038]. The use of various data layers is disclosed. [0051]. The use of various adhesive materials including acrylates, silicon hardcoats and non-acrylic materials is disclosed. [0103-0104]. The use of various substrate materials is disclosed. [0028-0045]. The provision of protective layers on either side of the data layer, such as nitrides, oxides and oxynitrides is disclosed. [0053]. The composition of the reactive layer is described and include percentages of the various components [0055-0077].

van de Grampel et al. '501 in the embodiment of figure 3,where the adhesive layer is atop the reactive layer. See example 6 which describes PMMA/leuco methylene blue solutions described in examples 14 (which referes to example 1) applied to aluminized polycarbonate substrate, which are then coated with a UV curable acrylate (Daicure SD698), and a polycarbonate disc and then cured using a UV light. The decrease in reflectivity over time is discussed. The use of various substrate materials is described (3/1-6/22). The use of various adhesive materials including acrylates, silicon hardcoats and non-acrylic materials is disclosed. (7/41-8/8). The composition of the reactive layer is described and include percentages of the various components [0055-0077]. The combination of the adhesive layer and the leuco dye is also disclosed in example 9.

Ezbainsky et al. '323 in example 15 describes PMMA/leuco methylene blue solutions described in examples 14 (which referes to example 1) applied to aluminized polycarbonate substrate, which are then coated with Daicure SD698, which is a UV curable adhesive, and a polycarbonate disc and then cured using a UV light. The decrease in reflectivity over time is shown in figures 3 and 4, where the reflectivity is initially above 60% for the deaerated samples

and declines over time to about 15%. [0136-0139]. The use of various specific polycarbonate materials is described in sections [0025-0038]. The use of various data layers is disclosed. [0051]. The use of various adhesive materials including acrylates, silicon hardcoats and non-acrylic materials is disclosed. [0103-0104]. The use of various substrate materials is disclosed. [0028-0045]. The provision of protective layers on either side of the data layer, such as nitrides, oxides and oxynitrides is disclosed. [0053]. The composition of the reactive layer is described and include percentages of the various components [0055-0077].

Wisnudel et al. '909 in example 2 describes the application of the reactive layer containing methylene blue to an aluminized DVD substrate, followed by contacting this with an adhesive Daicure SD-640 and another polycarbonate disk. The decrease in reflectivity over time is shown in figures 3 and 4, where the reflectivity is initially above 60% for the deaerated samples and declines over time. The use of various specific polycarbonate materials is described (3/62-9/33). The use of various data layers is disclosed (10/26-57). The use of various adhesive materials including acrylates, silicon hardcoats and non-acrylic materials is disclosed. (16/51-17/64). The use of various substrate materials is disclosed. (3/62-9/33). The provision of protective layers on either side of the data layer, such as nitrides, oxides and carbides and the like is disclosed. (11/7-17). The composition of the reactive layer is described and include percentages of the various components (11/46-13/3).

Akiyama et al. JP 60-261046 teach encapsulation of optical recording media in UV curable coatings to provide additional protection with an even coating.

Akiyama et al. JP 60-256944 teach encapsulation of optical recording media in UV curable coatings to provide additional protection with an even coating.

It would have been obvious to one skilled in the art to modify the invention of either of Ezbainsky et al. '892, van de Grampel et al. '501, Ezbainsky et al. '323 or Wisnudel et al. '909 by providing additional protection over the entire medium to prevent damage and prevent moisture intrusion along the edges as taught by Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944. Further it would have been obvious to one skilled in the art to use other substrate materials, other adhesive materials and/or other binders in the reactive layer disclosed as useful in place of those used in the examples with a reasonable expectation of forming a useful optical recording medium protected by a limited readout mechanism.

The examiner holds that UV cured coatings inherently have some oxygen permeability and cites Larson et al., "Properties of radiation cured coatings", Intern. J. Rad Appl. Instrum. Part C, Rad. Phys & Chem. Vol. 30(1) pp. 11-15 and Sax et al., "Permeabilities of radiation cured materials", Intern. J. Rad Appl. Instrum. Part C, Rad. Phys & Chem. Vol. 31(4-6) pp. 887-896.

The applicant argues that the references do not disclose separate adhesive layers. The examiner points out that this is wheat the "SD" compositions cited in the discussion of the references are. van de Grampel et al. '501 also discusses the reactive layer combined with the adhesive layer. All of the references teach the recited reflectivities in the cited portions and the compositions, which the examiner has directed the applicant to above and assertions to the contrary by the applicant are without merit. The addition of Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944 who teach the encapsulation of optical recording media addresses the issue of the barrier layer in the position required by the claims.

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection

is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1,2 and 4-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-39 of U.S. Patent No. 6790501 in view of Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944.

It would have been obvious to one skilled in the art to modify the invention of claims 1-39 of U.S. Patent No. 6790501 by providing additional protection over the entire medium to prevent damage and prevent moisture intrusion along the edges as taught by Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944.

The addition of Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944 address the issue of the barrier layer being taught.

8. Claims 1,2 and 4-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent No. 6866909, in view of Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944.

It would have been obvious to one skilled in the art to modify the invention of claims 1-31 of U.S. Patent No. 6866909 by providing additional protection over the entire medium to

prevent damage and prevent moisture intrusion along the edges as taught by Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944.

The case were the reactive layer includes a UV curable material is recited in the claims and this is inherently an adhesive.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Martin J Angebranndt
Primary Examiner
Art Unit 1756

09/11/2006